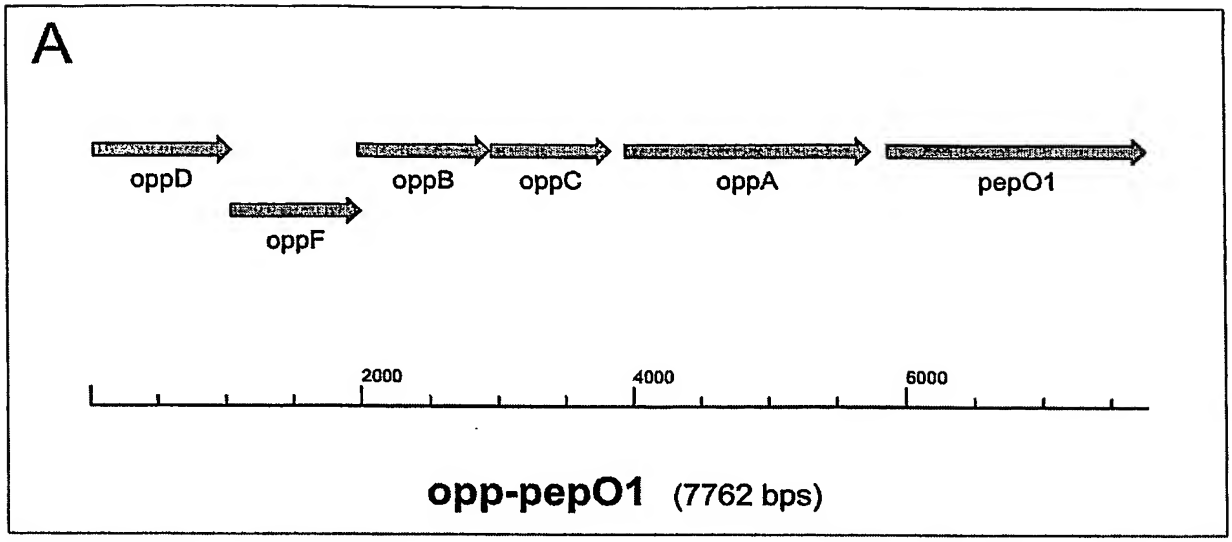
Fig. 1


A
oppD
oppF
oppB
oppC
oppA
pepO1
2000
4000
6000
opp-pepO1 (7762 bps)

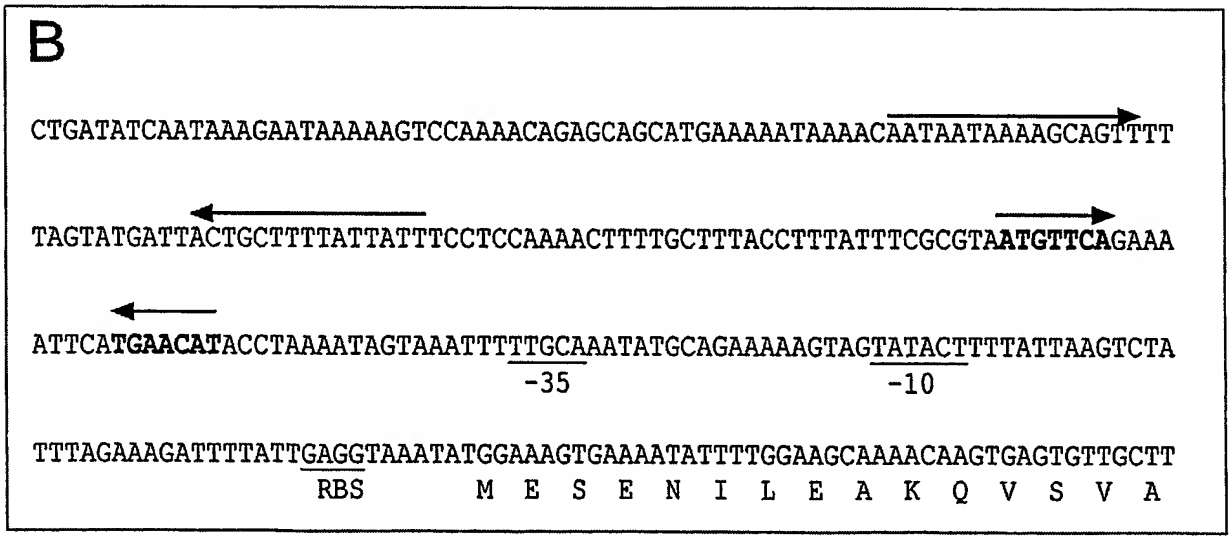

B
CTGATATCAATAAAGAATAAAAAGTCCAAAACAGAGCAGCATGAAAAATAAAACAATAATAAAAGCAGTTTT
TAGTATGATTACTGCTTTTATTATTTCCTCCAAAACTTTTGCTTTACCTTTATTTCGCGTAATGTTCAGAAA
ATTCATGAACATACCTAAAATAGTAAATTTTTGCAAATATGCAGAAAAAGTAGTATACTTTTATTAAGTCTA
-35
-10
TTTAGAAAGATTTTATTGAGGTAAATATGGAAAGTGAAAATATTTTGGAAGCAAAACAAGTGAGTGTTGCTT
RBS M E S E N I L E A K Q V S V A

Fig. 2

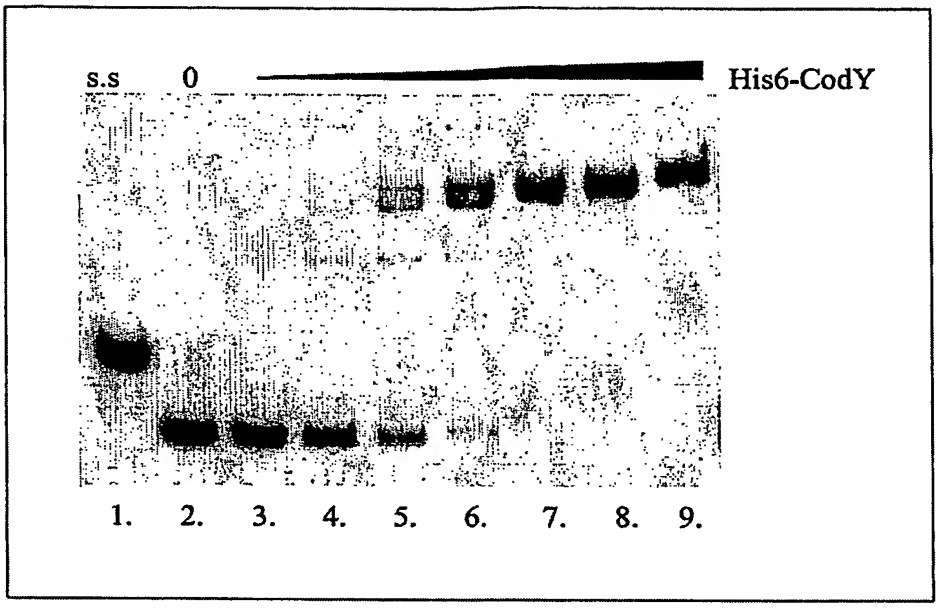
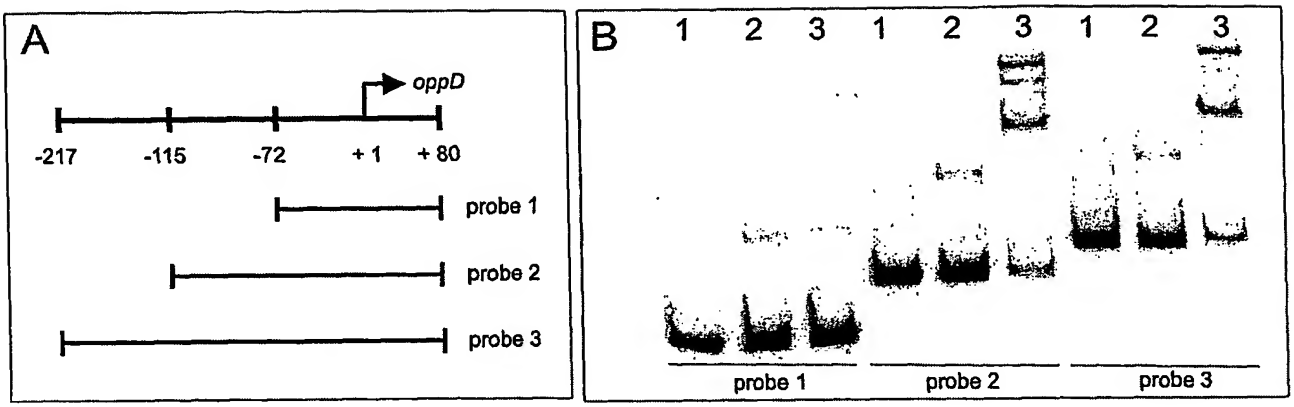


Fig. 3


A
oppD
-217
-115
-72
+ 1
+ 80
probe 1
probe 2
probe 3
B
1 2 3 1 2 3 1 2 3
probe 1
probe 2
probe 3

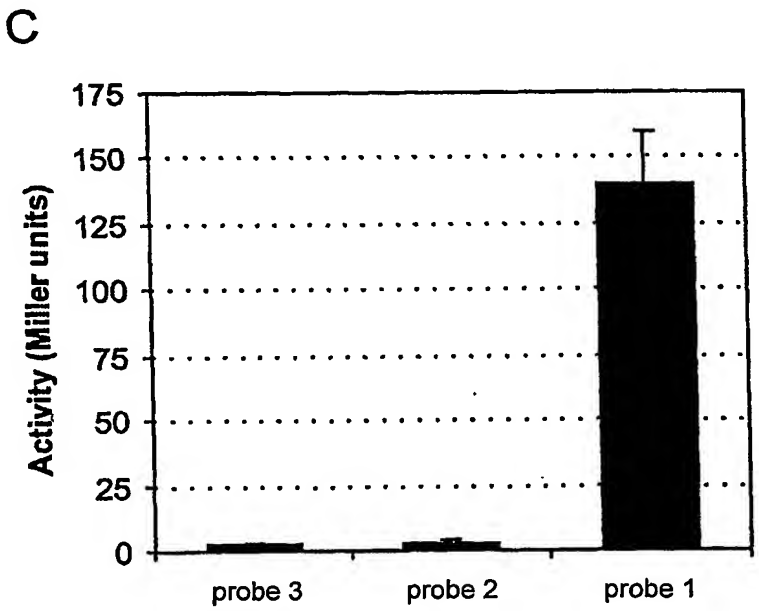

C
Activity (Miller units)
175
150
125
100
75
50
25
0
probe 3
probe 2
probe 1

Fig. 4

A

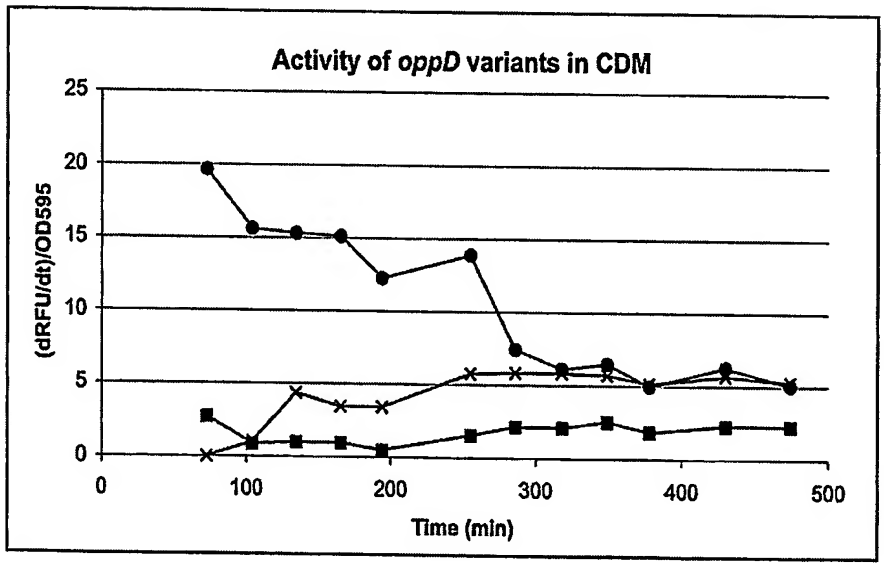
AATGTTCAGAAAATTCATGAACATAC *WT*

AATATTAAGAAAATTCATGAACATAC *Opp15(a)*

ACTGTGCCGAAAATTCATGAACATAC *Opp15(b)*

AACTGCAGGAAAATTCATGAACATAC *Opp 2*

B



C

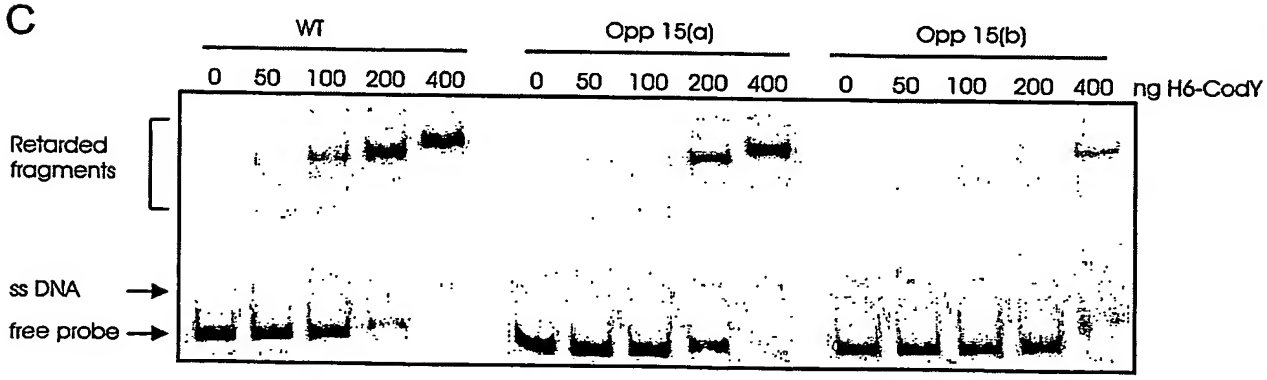


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Fig. 4D

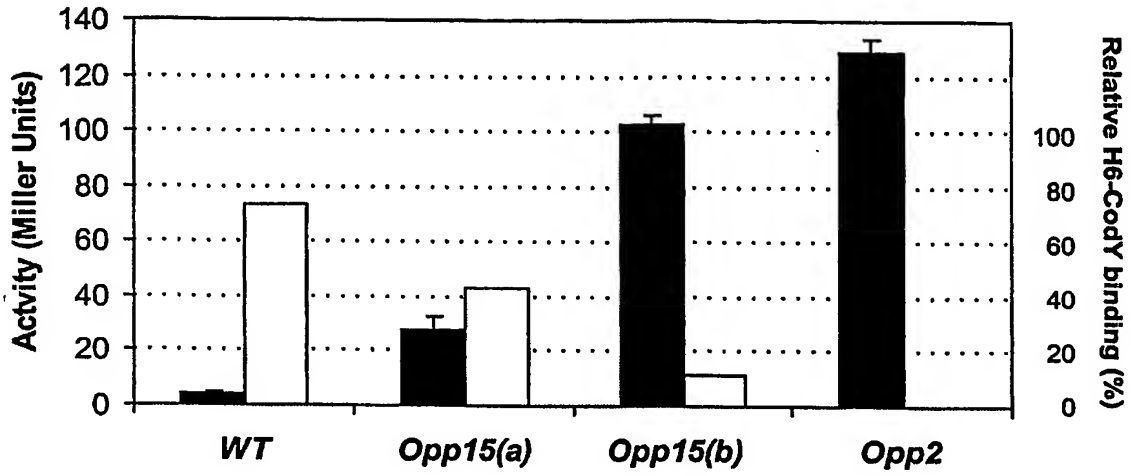

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Fig. 5A

WT	CGTA ATGTTCA GAAAATTCA TGAACAT ACC
MUT2	CGTA ATGTTC**T** GAAAATTCA TGAACAT ACC
MUTF	CGTA ATGTTCA GAAAATTCA TG**G**ACAT ACC
MUT4	CGTA ATGTTCA GAAAATTCA TGA**G**CAT ACC
MUT3	CGTA **G**TGTTCA GAAAATTCA TGAACAT ACC
MUT10	CGTA ATGT**C**CA GAAAATTCA TGAACAT ACC
MUT16	CGTA ATGTTC**G** GAAAATTCA TGAACA**C** ACC

Fig. 5B

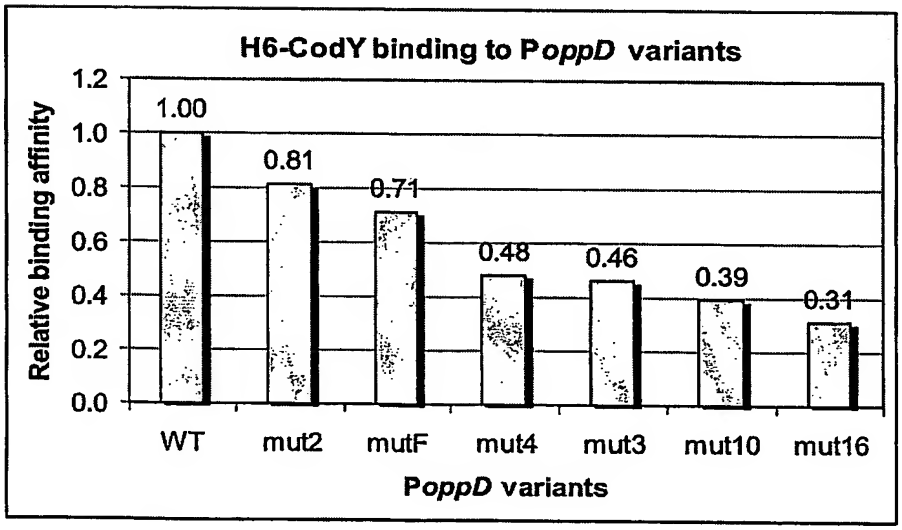

Fig. 6A

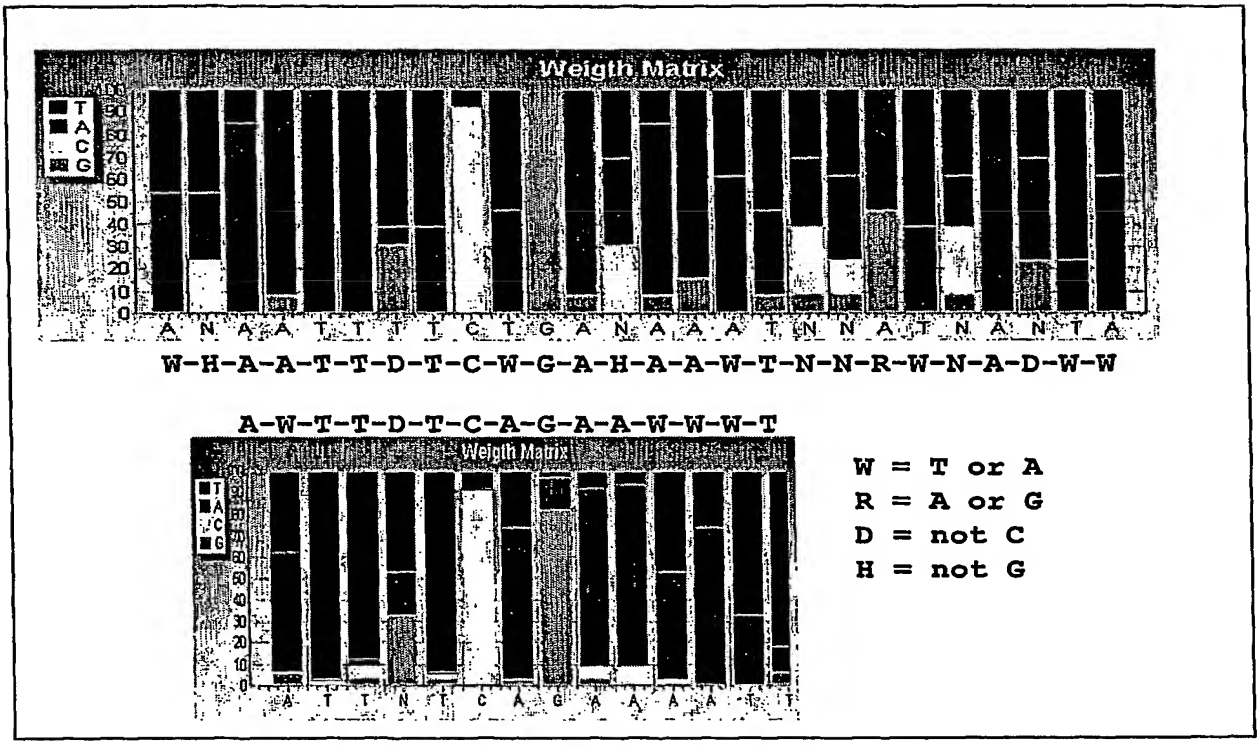

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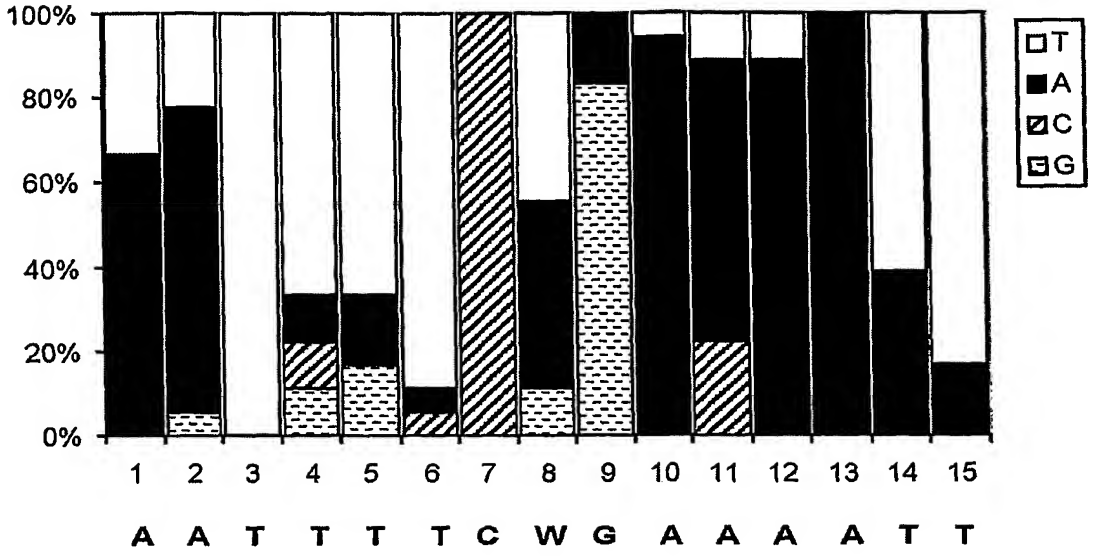
Fig. 6B



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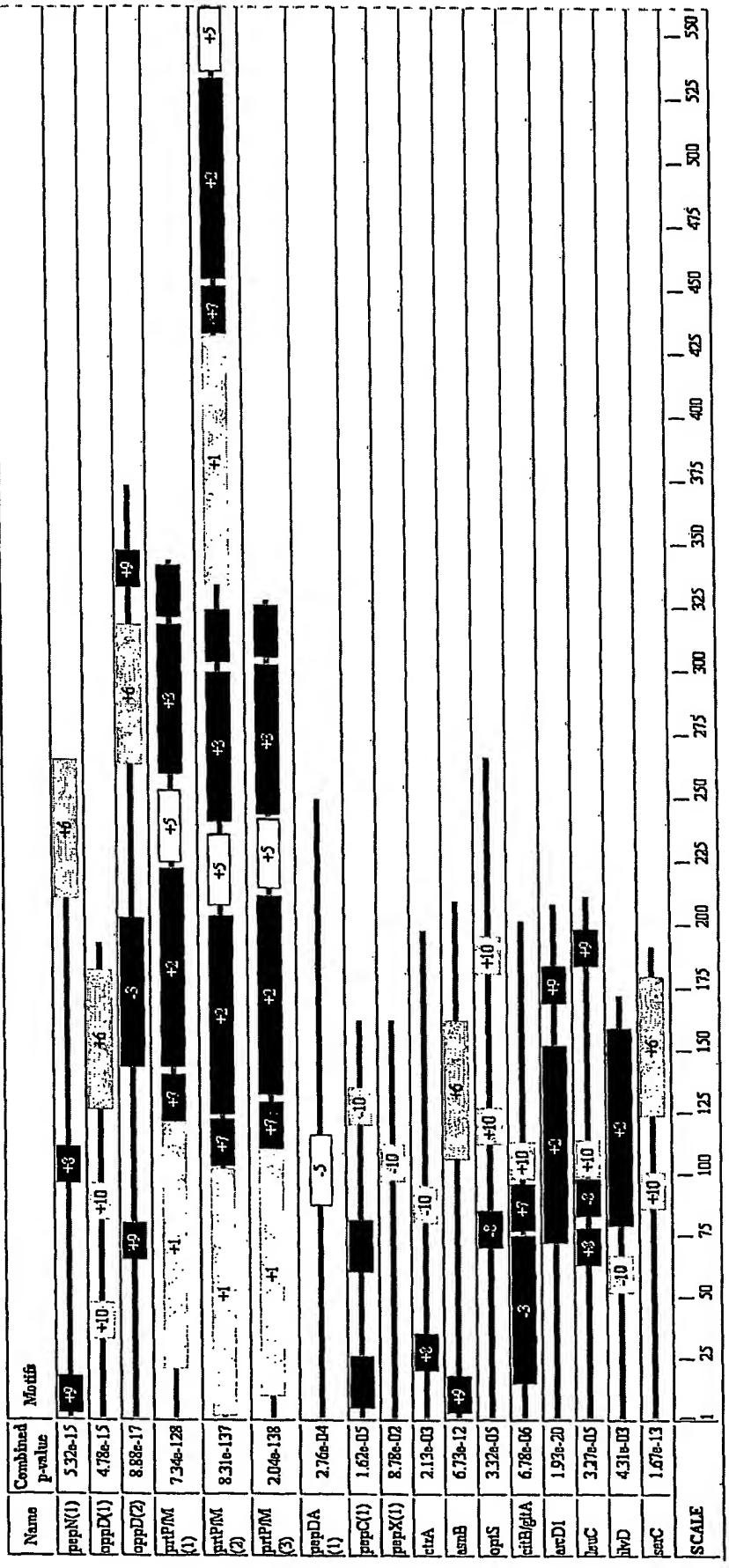

Fig. 7

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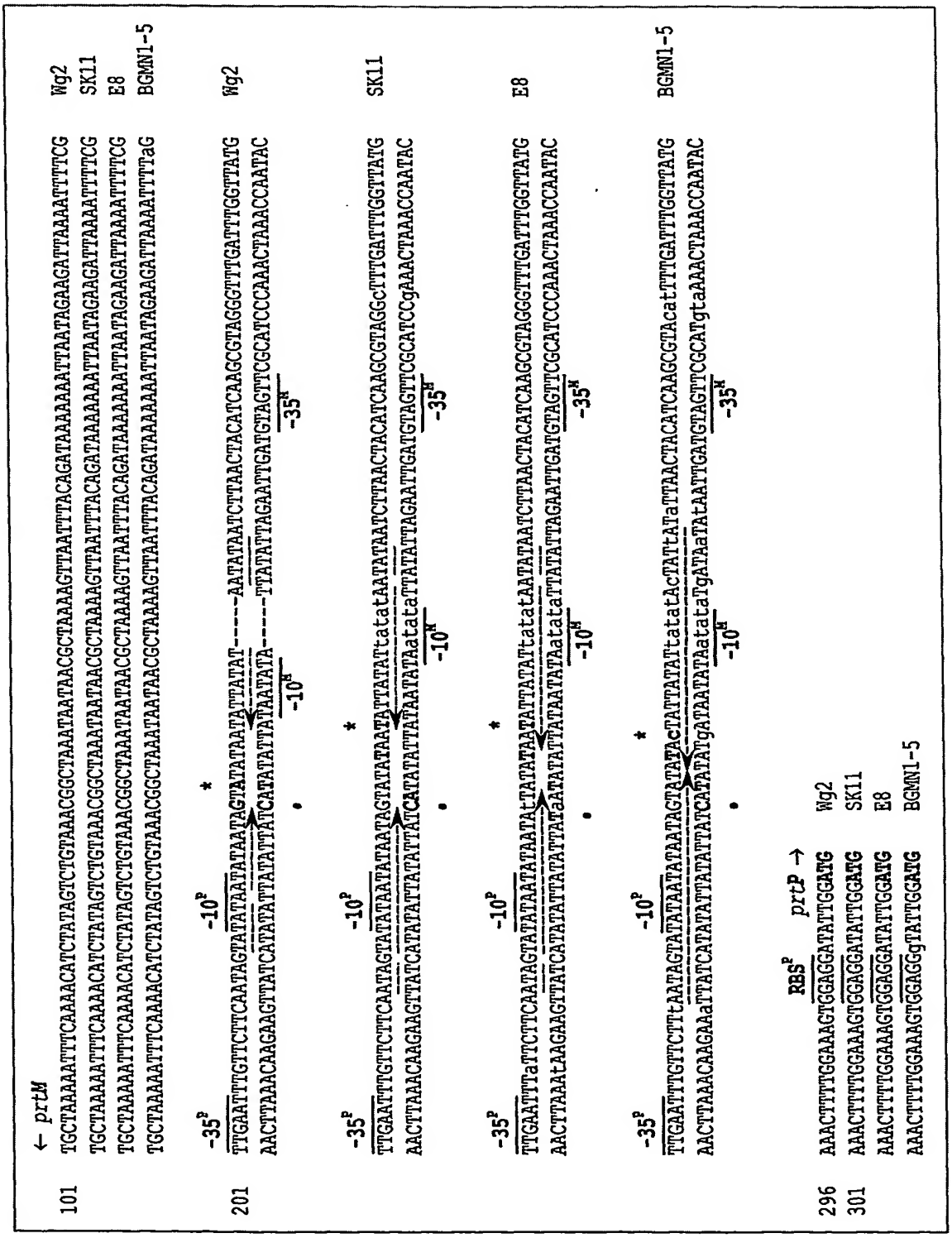
← prtM
101 TGCTAAAAATTTCAAAACATCTATAGTCTGTAAACGGCTAAATAACGCTAAAAGTTAATTTACAGATAAAAAAATTAATAGAAGATTAAAATTTTCG Wg2
TGCTAAAAATTTCAAAACATCTATAGTCTGTAAACGGCTAAATAACGCTAAAAGTTAATTTACAGATAAAAAAATTAATAGAAGATTAAAATTTTCG SK11
TGCTAAAAATTTCAAAACATCTATAGTCTGTAAACGGCTAAATAACGCTAAAAGTTAATTTACAGATAAAAAAATTAATAGAAGATTAAAATTTTCG E8
TGCTAAAAATTTCAAAACATCTATAGTCTGTAAACGGCTAAATAACGCTAAAAGTTAATTTACAGATAAAAAAATTAATAGAAGATTAAAATTTTaG BGMN1-5
-35P -10P *
201 TTGAATTTGTTCTTCAATAGTATATAATAGTATATAAATATTATAT-----AATATAATCTTAACTACATCAAGCGTAGGGTTTGATTTGGTTATG Wg2
AACTTAAACAAGAAGTTATCATATATTATCATATATTATAATATA-----TTATATTAGAATTGATGTAGTTCGCATCCCAAACTAAACCAATAC
-10M -35M
-35P -10P *
TTGAATTTGTTCTTCAATAGTATATAATAGTATATAAATATTATATTatataATAATCTTAACTACATCAAGCGTAGGcTTTGATTTGGTTATG SK11
AACTTAAACAAGAAGTTATCATATATTATCATATATTATAATATAaTTATATTAGAATTGATGTAGTTCGCATCCgAAACTAAACCAATAC
-10M -35M
-35P -10P *
TTGAATTTaTTCTTCAATAGTATATAATAGTATATAAATATTATATTatataATAATCTTAACTACATCAAGCGTAGGGTTTGATTTGGTTATG E8
AACTTAAATAAGAAGTTATCATATATTATCATATATTATAATATAaTTATATTAGAATTGATGTAGTTCGCATCCCAAACTAAACCAATAC
-10M -35M
-35P -10P *
TTGAATTTGTTCTTtAAATAGTATATAATAGTATATAcTATTATATTatataCTATtATaTTTAACTACATCAAGCGTAcatTTTGATTTGGTTATG BGMN1-5
AACTTAAACAAGAAaTTATCATATATTATCATATGaTAATATaTAATTGATGTAGTTCGCATgtaAAACTAAACCAATAC
-10M -35M
RBSP prtP →
296 AAACTTTTGGAAAGTGGAGGATATTGGATG Wg2
301 AAACTTTTGGAAAGTGGAGGATATTGGATG SK11
AAACTTTTGGAAAGTGGAGGATATTGGATG E8
AAACTTTTGGAAAGTGGAGGgTATTGGATG BGMN1-5

Fig. 8

Fig. 9

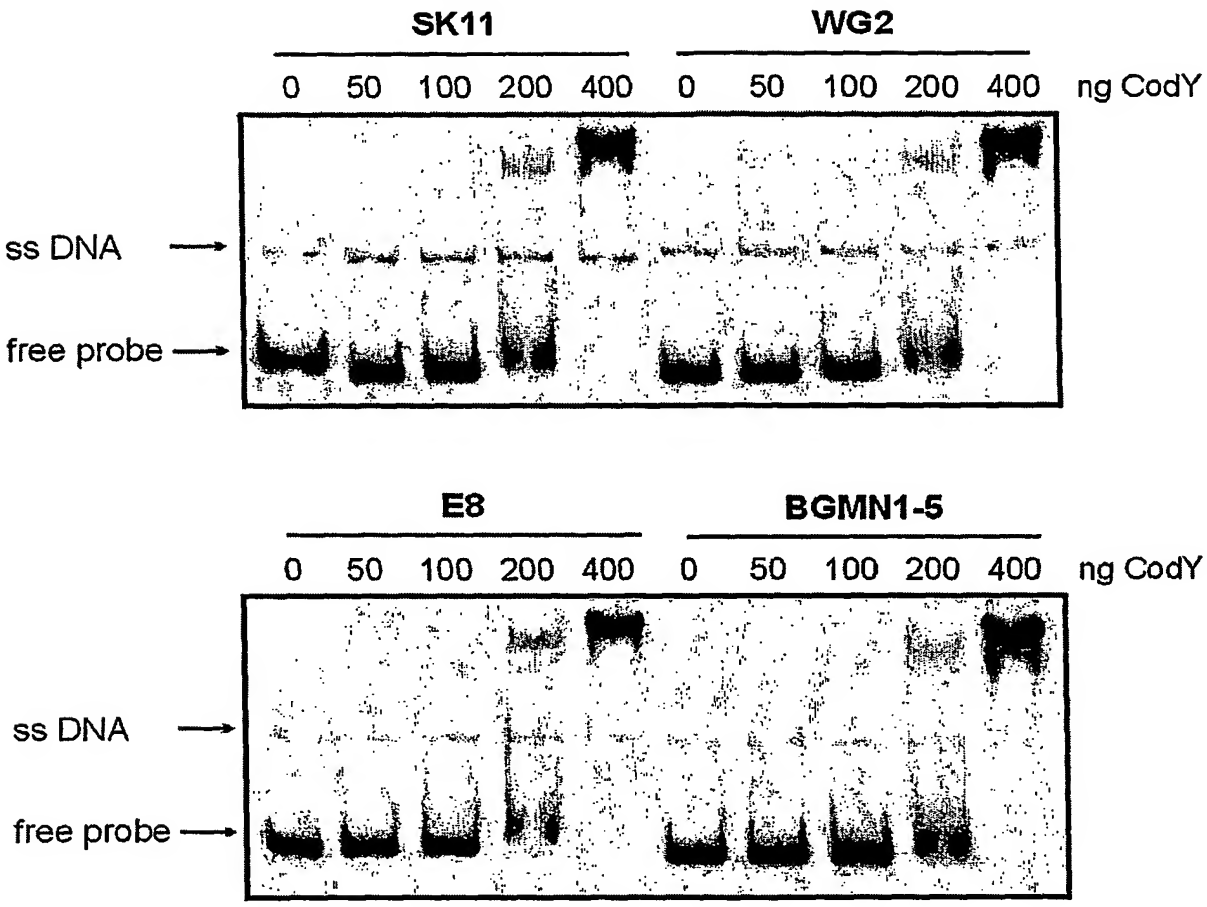
SK11
WG2
0 50 100 200 400 0 50 100 200 400 ng CodY
ss DNA
free probe
E8
BGMN1-5
0 50 100 200 400 0 50 100 200 400 ng CodY
ss DNA
free probe

Fig. 10

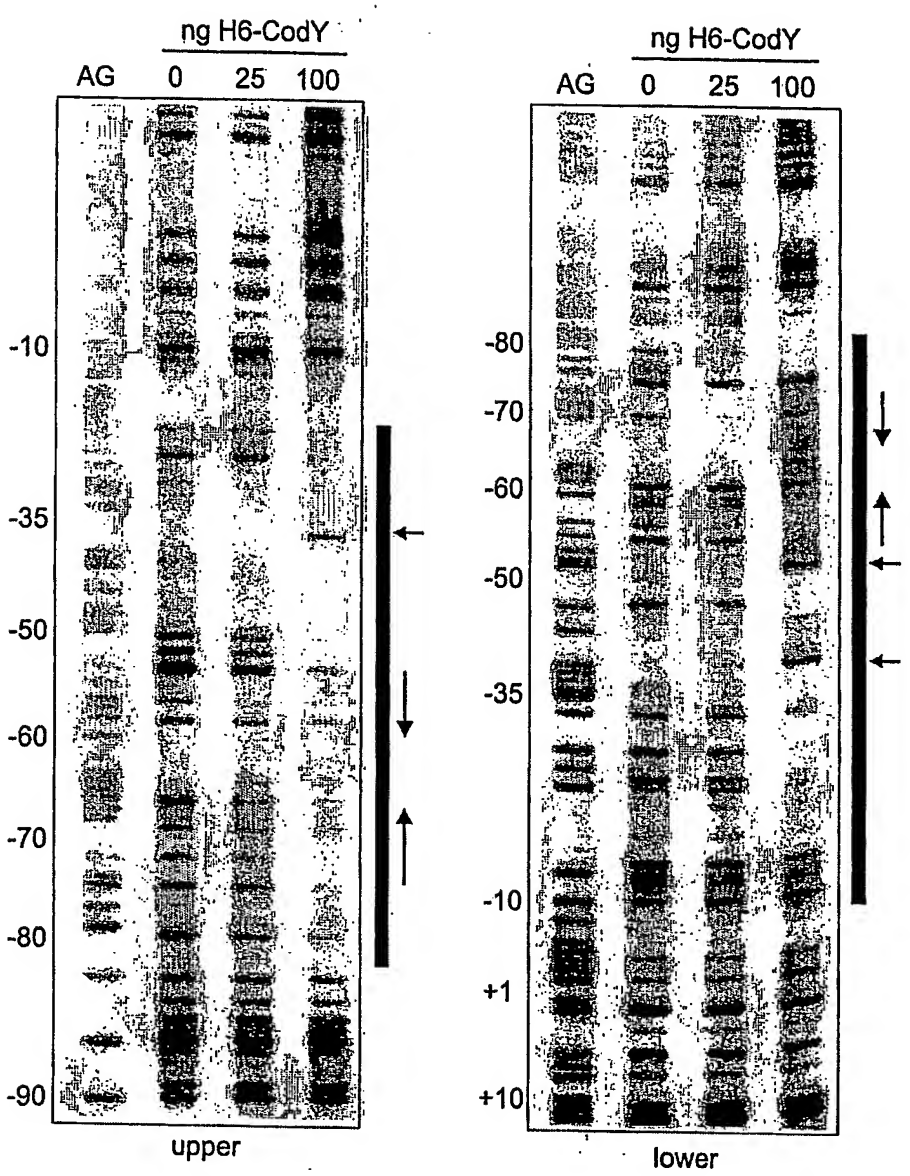

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Fig. 11

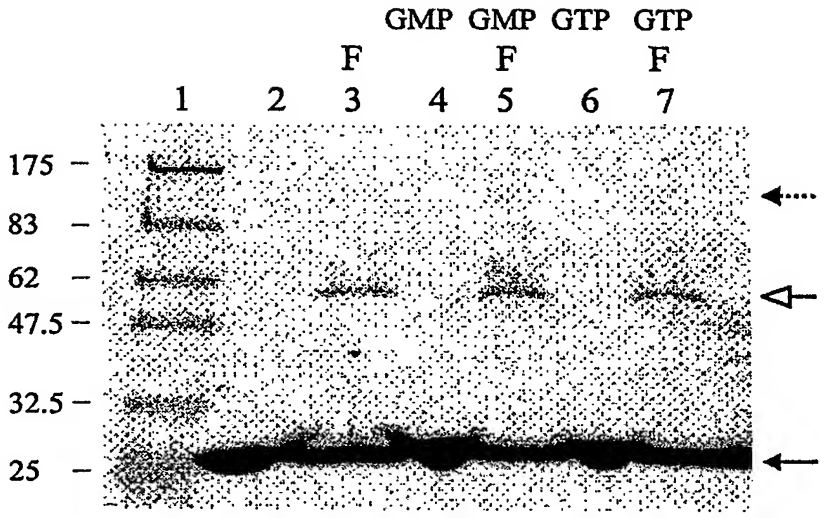

Fig. 12

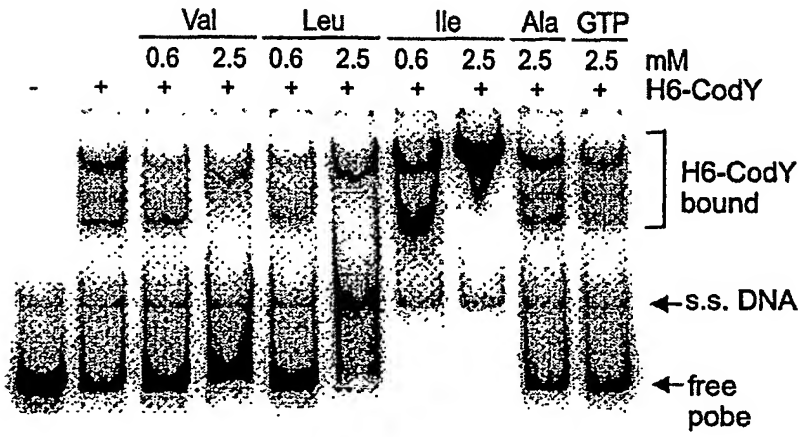

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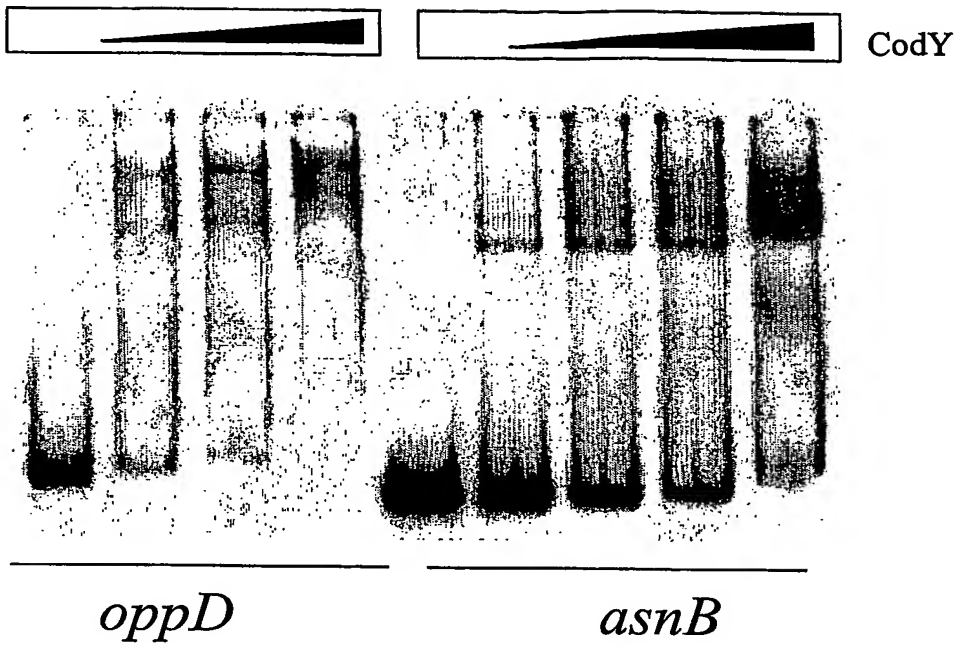
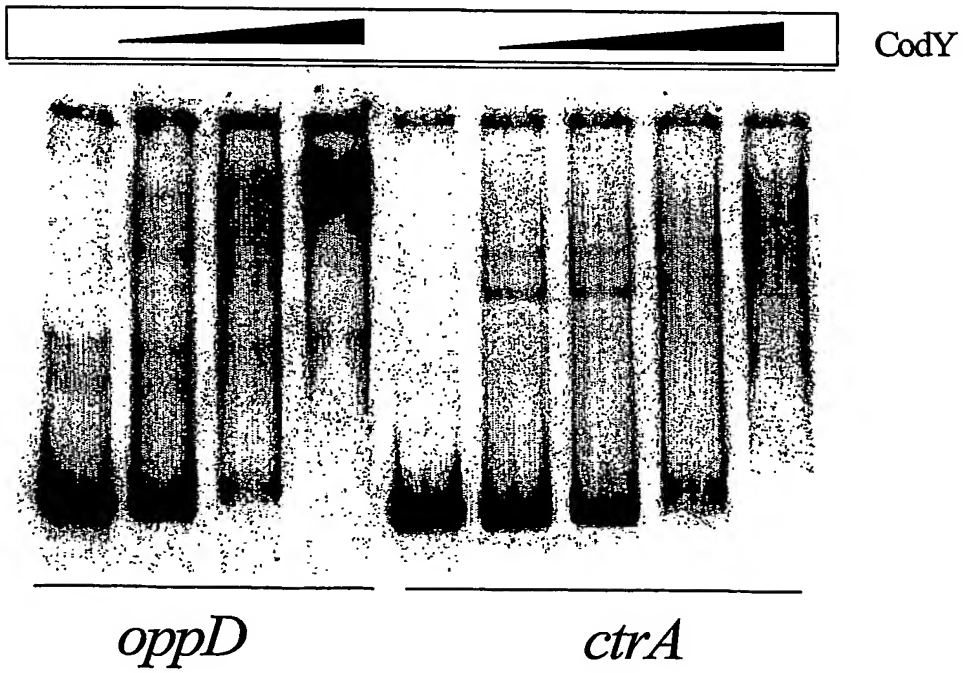
Fig. 13





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